

Reliability of the Grid

The Government of India has recently announced and undertaken a variety of steps which would fuel the changing energy scenario of India in the years to come. A major stepping stone in this direction is the 24x7 Power to All Scheme by the year 2022. Certain key schemes like the Deen Dayal Upadhyaya Grameen Jyoti Yojana and the Integrated Power Development Scheme have been launched to facilitate this goal. Although the path towards this goal is subject to a multitude of logistical and fiscal constraints, the attainment of the same would be a key element in changing the face of the energy sector of India. Therefore, the IESS, 2047 Version 2.0 offers the user an option to select the level of reliability of the grid i.e four scenarios on the availability of electricity when demanded. These tie back to the aforementioned target of 24x7 Power to All by 2022.

Once the user selects their preferred scenario for this lever, the option thus selected is modelled into the energy demand scenarios for the different demand sectors and feeds into the generation of the aggregate energy demand.

The base case (2012) assumes that that 80% of the electricity in the residential sector and 92% electricity in the Commercial sector is available when demanded i.e level of reliability of the grid. A portion of the unmet demand is met by local diesel backup.

LEVEL 1

A pessimistic scenario. Assumes that due to logistical, infrastructural and financial bottlenecks, the 24x7 target to provide electricity to all is unmet in both the Residential as well as the Commercial sectors by the year 2047. The grid is unable to meet 20% and 15% of the electricity requirements even in the year 2047, a proportion of which is supplied by local diesel backup.

LEVEL 2

A moderately better scenario than level 1. Assumes that the 24x7 target to provide electricity to all is met by the year 2042 in the Residential sector as well as the Commercial sector.

LEVEL 3

An aggressive scenario. Assumes that the 24x7 target to provide electricity to all is met by the year 2032 in the Residential sector as well as the Commercial sector.

LEVEL 4

Attainment of the goal of the Government:

Assumes that the 24x7 target to provide electricity to all is met by the year 2022 in the Residential sector as well as the Commercial sector.